Daily Diary Report by Bid Item

Contract No.: **04-0120F4**

Diary #: **571** **Const Calendar Day:** 974 **Date:** **09-May-2012** **Wednesday**

Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**

Inspection Type: Continuous

Shift Hours: 07:00 am 07:30 am **Break:** 00:30 **Over Time:** 04:00

Federal ID:

Location:

Reviewer: **Schmitt, Alex** **Approved Date:** **Status:** Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature **7 AM** 60 - 70 **12 PM** 70 - 80 **4PM** 70 - 80

Precipitation 0.00" **Condition** Mostly sunny to clear

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

Checked the following cable band layout marks placed on the compacted South Sidespan cable tonight/tomorrow morning with the assistance of Douglas Wright, Victor Altamirano, and David Chung:

1.) Overall length of the cable and cable band spacing
2.) Top dead center marks placed on the compacted cable at the 1.5m offsets

Upon arrival on the bridge at 9:00pm the ABF surveyors were well into their first overall length measurement going from the W2E west deviation saddle to the tower saddle. Once again the ABF surveyors measured the overall length of the cable twice. Similar conditions were observed in this night/early morning shift as the previous one where the ambient and steel temperatures didn't match each other until approximately at midnight.

The ambient temperature at this time was 54F, the steel tape was 54F, and the steel cable temperatures were 63F touching the outer wires and 72F when the probe was wedged in between the wires. I spoke with and cautioned ABF survey party chief Dave Adams, about performing layout work until the conditions permitted per their submittal. However performing a quick calculation due to the temperature difference yielded a total change in length of 23mm. When distributing this error over the total length the difference between cable band centerlines is 1mm.

While ABF surveyors were in the process of measuring the overall length and laying out the cable band centerlines, they were using 4 ladders available for this operation. As of now, there have been 6 ladders assigned to the ABF surveyors and Caltrans engineers for the cable band layout work. One ladder was retrieved from the North Sidespan catwalk and the sixth ladder couldn't be found despite efforts to locate it on the bridge. Therefore since at least 3 ladders are needed for the taping operation, we had to wait until the ABF surveyors were done measuring and took a dinner break to gain access onto the top of the cable.

Once 3 ladders were available we began taping the overall length of the South Sidespan cable from the W2E west deviation saddle to the Tower saddle. As in previous nights Doug held the weight scale, and I read the other end. David and Victor checked for twist and straightness in the tape, and ensured the tape was resting properly on top of the cable when measuring. The overall length measured once was 202.450m (Uphill) from the saddles where ABF measured 202.472m Uphill and 202.468 Downhill respectively.From the Tower saddle we taped the distance between each cable band centerline to the W2E west deviation saddle. The cumulative distance for this set of measurements was 202.455m Downhill. Overall the difference in the ambient and steel temperatures seen when ABF performed their measurements was insignificant. The Caltrans operation began at 12:20am and was completed at 3:00am.

While we were on the Downhill taping run of the cable band distance centerline QA check ABF began to layout the top dead center of the cable. They were done with the task approximately at 3:00am which is when we proceeded to take our measurements on this mark. It should be noted that the ABF surveyors set the top dead center marks after midnight when the conditions were acceptable. Our tolerance for the top dead center is 6mm in any direction. There was a total of 13 top dead center measurements that exceeded this tolerance and we would like ABF to correct the marks prior to marking the cable band rotational camber centerline.

Speaking with ABF survey party chief Dave Adams their plan is to take the rest of Thursday May 10th off. They plan on working a regular 8hr shift on Friday and marking the cable band arc lengths, rotational camber centerline, and circumferential lines at the 1.5m offsets. We did not get a chance to tell them that 10 cable bands couldn't be marked up due to the top dead center marks being out of tolerance. The reason being that we completed the task well after they had left the jobsite and all personnel were fatigued from the night/early morning shift.

Overall the ABF surveyors completed the South Sidespan layout of the cable band centerlines which was deemed acceptable. They also completed marking the top dead center on the 1.5m offset marks from the cable band centerline. As noted there still is some corrections on this layout item prior to proceeding. Nothing was approved for the South Sidespan tonight/early this morning.

- Wrote an email to pertinent Team Cable members briefing them on the status of the cable band layout as it pertains to cable band placement/erection during the day. Also spoke with Brian and Roman about the details of the operation during this shift.

- Completed the inspection checklist for the overall cable length and cable band centerlines for the South Sidespan cable bands 40S through 9S.

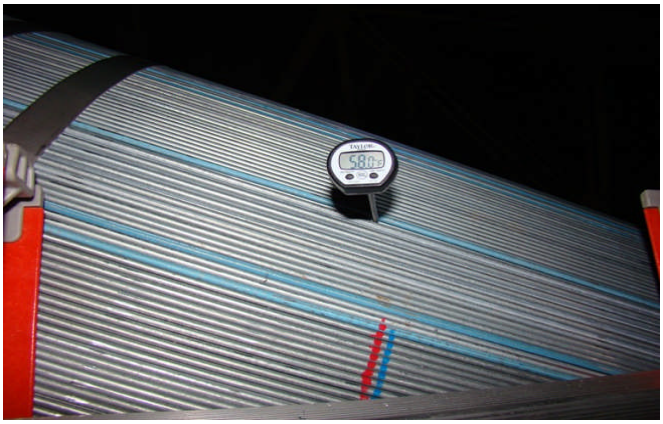
- Completed the inspection checklist for the Top Dead Center marks for the South Sidespan cable bands 40S through 9S.

Attachment

ABF surveyors in the process of measuring the overall distance of the South Sidespan cable prior to laying out the cable band centerlines.

Temperature of the steel tape used, note that the steel tape doesn't take as long as the cable steel to cool down and match the ambient temperature.

Ambient and steel temperatures taken on near the W2E deviation saddle while ABF surveyors where laying out the South Sidespan cable band centerlines.



Steel temperature measured at 22S while measuring the cable band centerline distances going downhill.